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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,441	02/06/2004	James E. Tatem JR.	HAR66 818 DIV 1	5148

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DUANE MORRIS LLP
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Washington, DC 20006

EXAMINER

BOCURE, TESFALDET

ART UNIT	PAPER NUMBER
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2611

MAIL DATE	DELIVERY MODE
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07/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/772,441

Applicant(s)

TATEM, JAMES E.

Examiner

Tesfaldet Bocure

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 53-55 and 61-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 53-55 and 61-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. Claims 53-55 and 61-63 are pending in the Application.
2. Applicant's "Petition under 37 C.F.R 1.78" in the remarks of April 20, 2007 is improper. A separate petition to correct the serial number of the parent application in which the instant application is claiming should be filed to the petition office.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 53-55 and 61-63 are rejected under 35 U.S.C. 102(b) as being anticipated by **Crutcher** (US patent number 4,546,322).

Crutcher teaches a Phase Lock Loop (see carrier recovery loop in fig. 1) for locking the phase or frequency of the received signal comprising: a locking mode or capture mode having a frequency range narrower (claimed first range) than the sweep mode or acquisition having a broader frequency range (claimed second range, see col. 6, lines 23-39); and inherently monitoring when in the sweep mode is switched to captured and locked mode (see col. 4, lines 22-42). It should be noted that when the phase of the VCO becomes identical to any one of the predetermined number of preferred phase (lock range) while in the sweep mode (see col. 6, lines 1-21), it

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inherently monitors whether the desire phase or frequency is reached in order to switch to phase locked mode.

When the system is in the lack or capture mode, the frequency of PLL circuit is locked based on the frequency error, therefore, it reads on the first frequency drift is substantially equal to the lock range of the PLL as in claim 53.

Further to claims 54,55 and 61, **Crutcher** teaches that:

The VCO is controlled through the switch 41 to be either in seep mode or lock mode as in claim 54, i.e. having a respective output either from the sweep mode or lock mode to control the VCO;

The oscillator (30) is Voltage Controlled Oscillator as in claim 55; and The ADV and RTD bits stored in the ROM are used by the PLL when in sweep mode and reads on the claimed storing in claim 61.

Further to claims 62 and 63, **Crutcher** also teaches that when the system is in sweep mode, it allows the VCO to move over the entire range of the possible frequencies or phases. Once the desire frequency or phase is found, it switches to phase lock loop (see col. 4, lines 22-43, col. 6, lines 1-23 and col. 13, lines 13-24). Therefore reads on the claimed predetermined and incremental size in claim 62 and returning to phase lock mode in claim 63.

Response to Amendment

5. In response to Applicant's argument that **Crutcher** does not teach:

---monitoring at least one of said phase lock loop mode of operation and said sweep mode of operation to determine a portion of said second range

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of frequency drift said first range is successfully able to maintain said frequency lock;
wherein the size of the first range of frequency drift is substantially equal to the lock range of the phase lock loop---

Examiner kindly disagrees with the Applicant's assertion. As indicated in the office action above and disclosed in col. 4, lines 22-43, col. 6, lines 1-23 and col. 13, lines 13-24 of the patent, the system of **Crutcher** should inherently monitor the frequency or phase range which is desired for the carrier recovery by the PLL so that the system will switch from sweep mode to PLL or capture mode.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tesfaldet Bocure whose telephone number is (571) 272-

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3015. The examiner can normally be reached on Mon-Thur (7:30a-5:00p) & Mon.-Fri (7:30a-5:00p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tesfaldet Bocure
Primary Examiner
Art Unit 2611



T.Bocure